

Test Procedure for §170.304 (a) Computerized provider order entry

This document describes the draft test procedure for evaluating conformance of complete EHRs or EHR modules to the certification criteria defined in 45 CFR Part 170 Subpart C of the Interim Final Rule (IFR) as published in the Federal Register on January 13, 2010. The document is organized by test procedure and derived test requirements with traceability to the normative certification criteria as described in the Overview document located at <http://healthcare.nist.gov>. These test procedures will be updated to reflect the certification criteria defined in the ONC Final Rule.

CERTIFICATION CRITERIA

§170.304 (a) Computerized Provider Order Entry. Enable a user to electronically record, store, retrieve, and manage, at a minimum, the following order types:

- (1) Medications;
- (2) Laboratory;
- (3) Radiology/imaging; and
- (4) Provider referrals

INFORMATIVE TEST DESCRIPTION

This section provides an informative description of how the test procedure is organized and conducted. It is not intended to provide normative statements of the certification requirements.

This test evaluates the capability for a complete EHR or combination of EHR Modules to enable a user to electronically record, store, retrieve, and manage the following order types:

- (1) Medications;
- (2) Laboratory;
- (3) Radiology/imaging; and
- (4) Provider referrals

The test procedure does not require electronic transmission of the orders to other health information systems.

This test procedure is organized into four sections:

- Record - evaluates the capability to enter orders into the EHR
 - The Tester enters the NIST-supplied orders for medications, laboratory, radiology/imaging, and provider referrals
- Store - evaluates the capability to electronically store orders for medications, laboratory, radiology/imaging, and provider referrals, within the EHR system
- Retrieve - evaluates the capability to display and view the orders that have been previously entered into the EHR

- The Tester displays the orders for medications, laboratory, radiology/ imaging, and provider referrals entered during the test
 - The Tester validates that the displayed order data are accurate and complete
- **Manage** - evaluates the capability of the EHR system to electronically discontinue entered orders for medications, laboratory, and radiology/imaging (Note: Provider referral orders have been intentionally omitted from this section of the test.)
 - The Tester displays the entered orders for medications, laboratory, and radiology/imaging
 - The Tester discontinues entered orders for medications, laboratory, and radiology/imaging
 - The Tester validates that the entered orders have a discontinued status

REFERENCED STANDARDS

None

NORMATIVE TEST PROCEDURES

Derived Test Requirements

DTR170.304.a – 1: Electronically Record and Store Orders

DTR170.304.a – 2: Electronically Retrieve Orders

DTR170.304.a – 3: Electronically Manage Orders

DTR170.304.a – 1: Electronically Record and Store Orders

Required Vendor Information

VE170.304.a – 1.01: Vendor shall identify a patient with an existing record in the EHR to be used for this test

VE170.304.a – 1.02: Vendor shall identify the EHR function(s) that are available to: 1) select the patient, 2) enter and store orders for medications, laboratory, radiology/imaging, and provider referrals, 3) retrieve orders for medications, laboratory, radiology/imaging, and provider referrals and 4) manage orders for medications, laboratory, and radiology/imaging

Required Test Procedure:

TE170.304.a – 1.01: Tester shall select order test data from NIST-supplied test data sets

TE170.304.a – 1.02: Using the EHR function(s) identified by the Vendor, the Tester shall select the patient's existing record and enter orders for medications, laboratory, radiology/imaging, and provider referrals

TE170.304.a – 1.03: Using the NIST-supplied Inspection Test Guide, the Tester shall verify that the orders have been entered correctly and without omission

Inspection Test Guide

IN170.304.a – 1.01: Tester shall verify that all of the order data are entered correctly and without omission

IN170.304.a – 1.02: Tester shall verify that the order data are stored in the patient's record for:

- medications
- laboratory
- radiology/imaging
- provider referrals

DTR170.304.a – 2: Electronically Retrieve Orders

Required Vendor Information

- No additional information required

Required Test Procedure:

TE170.304.a – 2.01: Using the EHR function(s) identified by the Vendor, the Tester shall select the patient's existing record and display the orders the Tester entered during the Record and Store Orders test for medications, laboratory, radiology/imaging, and provider referrals

TE170.304.a – 2.02: Using the NIST-supplied Inspection Test Guide, the Tester shall verify that the order data display correctly and without omission

Inspection Test Guide:

IN170.304.a – 2.01: Tester shall verify that the order data entered during the Record and Store Orders test display correctly and without omission, including

- medications
- laboratory
- radiology/imaging
- provider referrals

DTR170.304.a – 3: Electronically Manage Orders

Required Vendor Information

- No additional information required

Required Test Procedure:

TE170.304.a – 3.01: Using the EHR function(s) identified by the Vendor, the Tester shall select the patient's existing record, shall display the order data entered during the Record and Store Orders test, and shall discontinue the previously entered orders for

medications, laboratory, and radiology/ imaging (Note: Provider referral orders have been intentionally omitted from this section of the test.)

TE170.304.a– 3.02: Using the NIST-supplied Inspection Test Guide, the Tester shall verify that the orders that were discontinued display correctly with a discontinued status

Inspection Test Guide

IN170.304.a – 3.01: Tester shall verify that the medication, laboratory, and radiology/imaging order data entered and stored during the Record and Store Orders test can be discontinued

IN170.304.a – 3.02: Tester shall verify that the discontinued orders are stored with a discontinued status in the patient record, including

- medications
- laboratory
- radiology/imaging

EXAMPLE TEST DATA

Medication Orders

Medication Brand (generic)	Dose	Form	Route	Frequency	Duration
Amoxil (Amoxicillin)	250 mg	Capsule	Oral	Every 8 hours	10 days
Plavix (clopidogrel)	75 mg	Tablet	Oral	Daily	
Catapres (clonidine hydrochloride)	0.1 mg	Tablet	Oral	2 times per day	

Laboratory Orders

Test	
Complete Blood Count w/ Differential (CBC)	Routine
Urinalysis	Routine
Total cholesterol	Routine
HDL cholesterol	Routine
LDL cholesterol	Routine
Triglycerides	Routine

Radiology/Imaging Orders

Test	
Chest X-ray 2 views	Routine
MRI without contrast Neck	Routine

Provider Referral Orders

Provider	Reason
Dr. Mark Jamison	Colonoscopy
Dr. Anna Perkins	Dermatology evaluation

CONFORMANCE TEST TOOLS

None